

Appl. No. 10/574,679
Remarks dated 02/20/2009
Reply to Office Action of 10/20/2008

Remarks

Rejections under 35 U.S.C. 103

Claims 1-5, and 7-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US Patent 3,329,661) in view of Hupfield (WO2003/16380) or Jo Lane et al. (US Patent 4,661,577).

Claims 1-9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Eguchi et al. (US Patent 4,316,941) in view of Ohmori et al. (US Patent 5,021,527).

Applicant respectfully submits that both 103 rejections do not provide a sufficient factual inquiry of obviousness as stated in *Graham v. John Deere Co.*, and further described in the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of the Supreme Court Decision in *KSR v. Teleflex Inc.*, (Federal Register/Vol. 72, No. 195, pages 57526-57535, and MPEP 2143). In particular, Applicant respectfully submits the factual assessment in the 10/20/2008 obvious rejections fails to account for differences between the cited references. Furthermore, the 10/20/2008 rejections fail to establish a *prima facie* case of obviousness. Each are traversed for the reasons as discussed below.

The rationale for asserting obviousness of the present claims in view of Smith and Hupfield/Jo Lane is found on page 3 of the 10/20/2008 office action:

At the time of invention, a person having ordinary skill in the art would have been motivated to do so because both Hupfield and Jo Lane each teach that aminofunctional polysiloxanes are employed as additives which impart softness (7:32-36 of Hupfield) and confer desirable properties such as "hand" to textiles (1:18-21 of Jo Lane)

Applicant respectfully submits that combination of Smith and Hupfield/Jo Lane fails to establish a *prima facie* case of obviousness using the teaching/suggestion/motivation to combine test. First, Applicant believes there is no explicit teaching or suggestion in either Smith or Hupfield/Jo Lane to motivate one skilled in the art to combine the respective

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compositions of Smith and Hupfield/Jo Lane. Starting with the fluorine-containing copolymers of Smith, there is no specific teaching or suggestion in the reference to combine such compositions with silicones, polysiloxanes, or the presently claimed amino functional polysiloxanes, let alone the amino polysiloxanes taught by Hupfield/Jo Lane. Conversely, starting with Hupfield/Jo Lane, there is no explicit teaching or suggestion to combine their amino functional polysiloxanes with any fluorine containing copolymers, let alone the fluorine containing copolymers of Smith. Thus, Applicant believes the 103 rejection based on the combination of Smith in view of Hupfield/Jo Lane fails the teaching/suggestion/motivation test to establish *prima facie* obviousness when read explicitly.

Applicant acknowledges the statement in the *Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of the Supreme Court decision in KSR International Co v. Teleflex (Federal Register/Vol. 72, No. 195, pages 57526-57535, and MPEP 2143.)*

The courts have made clear that the teaching, suggestion, or motivation to combine test is flexible and an explicit suggestion to combine the prior art is not necessary. The motivation to combine may be implicit and may be found in the knowledge of one of ordinary skill in the art or in some cases from the nature of the problem to be solved.

Applicant respectfully submits the 103 rejection attempts to rely on implicit teachings, implicit suggestions and implicit motivations in the references to combine the prior art references to allege obviousness. However, Applicant traverses the reasons for the implied motivation to combine the references, as asserted in the 10/20/2008 office action, and respectfully submits the Office has erred in its findings of obviousness based on Smith in view of Hupfield/Jo Lane, for the reasons discussed below.

Smith's fluorine-containing copolymers indeed are used to treat fabrics. However, Smith explicitly states at 2-60-63;

The treatment of these fabrics with the compositions of this invention imparts no adverse effect to the hand of the fabric and in some cases has a softening effect, thereby improving the hand.

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Applicant believes that one skilled in the art, upon reading such statements in Smith, would not be motivated to seek improvements in the hand of fabrics treated with Smith's compositions. Applicant respectfully submits that the 103 rejection based on Smith overlooks such statements and therefore does not support the alleged motivation to combine Smith with Hupfield or Jo Lane.

The office action asserts that;

Smith explicitly teaches that for treatment of fabrics, the perfluorinated glycidyl acrylate copolymers that therein may be mixed with other treating agents, including softeners.

Applicant believes this statement refers to 3:10-14 and 4:8-14 of Smith, as reproduced below respectively.

The substrate can be treated with one or more conventional finishes (such as mildew preventives, moth resisting agents, crease resistant resins, lubricants, softeners, sizes, flame retardant, antistatic agents, dye fixatives, and water repellents)....

In the treatment of fabrics, the copolymers of this invention may be applied prior to, subsequent to or in admixture with other treating agents, such as modified crease resisting resins, sizes, softeners, and water repellents.

Applicant submits that Smith teaches the use of its fluorinated copolymers with other softeners, either as separate fabric treatment processes, or in physical combination with other softeners. Applicant believes that Smith's discussion at 3:10-14 and 4:8-14 fails to teach or suggest the formation of a new polymeric product as prepared in a separate reaction of Smith's fluorinated copolymers with a softener.

Furthermore, Smith fails to teach or suggest the selection of an amino functional polysiloxane as a "softener". Applicant submits that the term "softener" is so broad and generic, that it encompasses an almost infinite number of possibilities. It fails to teach or suggest with specificity whether the softener should be fluoro, organic, or silicone based, let

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alone a sufficiently specific teaching or suggestion to an amino functional polysiloxane. Thus, one skilled in the art upon reading Smith, and looking to improve softening (which is questionable given the statements in Smith as noted above), would have to select from a large number of possible softeners. Applicant respectfully submits that such lack of specificity fails to establish a *prima facie* case of obviousness.

The office action further asserts on pages 3-4;

Further still, Smith et al. teaches that the addition of primary diamines to the compositions bring about a degree of crosslinking (2:70-72). Therefore, a person having ordinary skill in the art would expect that the aminopolysiloxanes as taught by both Hupfield et al. and Jo Lane et al. would inherently react with the epoxy-containing groups of the perfluorinated copolymers taught by Smith.

Applicant respectfully submits this statement does not sufficiently justify with specificity why one skilled in the art, looking for "primary diamines" to bring about a degree of crosslinking" to the compositions of Smith, would be motivated to choose the aminopolysiloxanes as taught by Hupfield or Jo Lane. Applicant submits that the term "primary diamines" is so broad, it does not suggest to one skilled in the art to select amino functional polysiloxanes. Thus, Applicant submits this assertion also fails to establish a *prima facie* case of obviousness and further relies on the arguments presented above.

In view of the foregoing remarks, Applicant respectfully submits the combination of Smith and Hupfield/Jo Lane to assert obviousness of the present invention is based on *hindsight*. The Office has apparently used the Applicant's teaching to search through the prior art for the claimed elements and then attempted to combine them as claimed. Absent any explicit/implicit teaching or suggestion in the references to combine them, Applicant respectfully submits that a *prima facie* case of obviousness has not been established based on Smith in view of Hupfield/Jo Lane.

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The 10/20/2008 office action further asserts the present claims are obvious over Eguchi in view of Ohmori.

Eguchi teaches a rubber stopper for sealing comprising a substrate which is partially or wholly coated with a fluorine-containing elastomer comprising a graft co-polymer having rubber-like elasticity and having chemical linkages of fluorine-containing polymeric segments and organopolysiloxane segments at reactive sites of said segments. While Eguchi teaches a fluoropolymer containing the reaction product of an amino-functional polysiloxane with a fluoropolymer derived from a fluoro monomer having a reactive group capable of reacting with the amino-functional polysiloxane, Eguchi fails to teach the addition of a perfluorinated co-monomer comprising the fluoro-substituted alkyl ester of an olefinically unsaturated carboxylic acid (component B2 in the present claims).

The 10/20/08 obviousness rejection asserts that Eguchi teaches (meth) acrylic acid esters are used in its compositions and states on page 5;

While Eguchi et al. does not explicitly teach that the (meth)acrylic acid esters are perfluorinated, it would have been obvious to a person having ordinary skill in the art to employ such perfluorinated acrylic monomers in the compositions of Eguchi et al; the motivation being rooted in the teachings of Eguchi et al. and echoed in the teachings of Ohmori et al (1:13-15)

The alleged reasons to motivate one skilled in the art to combine Eguchi and Ohmori (or select a fluoro-substituted alkyl ester of an olefinically unsaturated carboxylic acid as an extension of Eguchi's use of (meth)acrylic acid monomers) are discussed on page 5 of the 10/20/2008 office action, as shown below;

Eguchi et al. is concerned with increasing the water repellency of coating compositions and Ohmori et al. teaches that is known to employ fluorinated acrylic polymers as useful water and oil-repellent agents. Based on these collective teachings, it would have been obvious to employ perfluorinated acrylic co-monomers in the compositions of Eguchi et al. with the motivation that inclusion of the perfluorinated acrylates would be expected to increase the water repellency of the coatings taught by Eguchi et al.

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Applicant traverses the reasons for the implied motivation to include perfluorinated acrylates in the teachings of Eguchi, or combine Eguchi and Ohmori, as asserted in the 10/20/2008 office action, and respectfully submits the Office has erred in its findings of obviousness based on Eguchi, or the combination of Eguchi and Ohmori for the reasons discussed below.

Applicants respectfully submit that the 103 rejection fails to cite explicit sections in either Eguchi or Ohormi that suggest such a combination to support a conclusion of obviousness. Rather, the rejection relies on "motivation being rooted in the teachings of Eguchi et al. and echoed in the teachings of Ohmori." In particular, the rejection relies on the common properties of water and oil repellency discussed in both Eguchi and Ohmori.

Applicant submits that "water and oil repellency" are inherent properties of many fluoro polymers. Applicant does not believe that selection of a certain sub-genus of fluoro polymers for addition to another genus or sub-genus of fluoro polymers to generically enhance water or oil repellency of the resulting fluoro polymer is sufficient motivation to combine such teachings to establish a *prima facie* case of obviousness. Applicant believes the teachings in Eguchi (or the combination of Eguchi and Ohmori to fluoro copolymers having "water and oil repellency") are inherent properties of fluorocarbon. One skilled in the art would not find sufficiently specific reasons to combine these references. Rather, the problems addressed in cited fluorocarbon polymer art seem to be more specific, as evidenced by the specific objectives recited in Eguchi and Ohmori.

Eguchi states at 2:30-35 its objective is to provide a rubber stopper for sealing which has a fluorine-containing elastomer coating layer having excellent heat resistance, chemical resistance and lubricating property to prevent contamination of impurities.

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Ohmori states at 1:22-25 that its main objective is to provide a fluorine-containing water and oil repellent composition for giving uniform tough coatings exhibiting high adhesion to the article to be treated.

Applicant submits that neither Eguchi or Ohmori have a specific objective to improve water and oil repellency (Applicant believes both seek to maintain a minimum level of water and oil repellency, inherently present from the fluorocarbon moieties, while modifying its fluorocarbon copolymers to achieve more specific objectives as stated).

Applicant submits that the fluorine-containing compositions of Ohmori are based on certain fluorine-containing acrylates (represented by formula (1) in Ohmori), added for the purpose of improving adhesion to articles (2:19-24). However, Eguchi does not teach a problem with adhesion of coatings from its fluorine containing elastomers. Rather, Eguchi specifically tests for adhesion of its fluorine containing elastomers (see 12: 18-36 and Example 2, Table 1) and reports good adhesion. Thus, Applicant submits that one skilled in the art, upon reading both Eguchi and Ohmori, would not be motivated to combine their respective teachings. That is, Applicant believes there is no specific teaching or suggestion in Eguchi to one skilled in the art to add the fluorine-containing acrylates of Ohmori to Eguchi's compositions.

In view of the foregoing remarks, Applicant respectfully submits the combination of Eguchi and Ohmori to assert obviousness of the present invention is based on *hindsight*. The Office has apparently used the Applicant's teaching to search through the prior art for the claimed elements and then attempted to combine them as claimed. Absent any explicit/implicit teaching or suggestion in the references to combine them, Applicant respectfully submits that a *prima facie* case of obviousness has not been established based on the teachings of Eguchi or Ohmori in view of Ohmori.

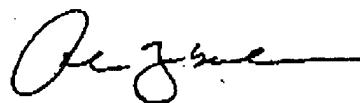
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The present response is being submitted within the six-month statutory period for response to the outstanding Office Action. Applicant authorizes the USPTO to charge deposit account 04-1520 for a one month extension, and any additional fees that should be necessary to maintain the pendency of the application.

In view of the above, it is respectfully submitted that the claims are in condition for allowance. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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